



ATGGCGCGGGCGGACACGGGCGCGGGCTCCTGGTGCTGACCTTCTGCCTGCTGTCCGCG 60  
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 CTGCAAGTGATCCTGGGCCCTGAGCAGGCTGTGGTGCTGGACTGCACCTTGGGGGCTACA 180  
 GCTGCTGGGCCCTCCGACAGGGTGACATGGAGCAAGGATGGAGACACTGTACTAGAGCAT 240  
 GAGAACCTGCACCTGCTACCCAATGGCTCCCTGTGGCTGTCTCACCCTAGAGCAAGAA 300  
 GACAGCGATGATGAGGAAGCTCTTAGGATCTGGAAGGTCACTGAGGGCAGCTATTCTGT 360  
 CTGGCCACAGCCCGCTAGGAGTGGTGGCCAGCCAGGTGCTGTGGTCAAGCTTGCCACA 420  
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 TTGAATGCCACCAAGGGCCTTCCAGCCCCATCATTACTTGGGAAAAGGACAGGTG 540  
 ACCGTGCCTGAGGAGCCCCGGCTCATCACTCTTCCCAAGTGGCTCTCCAGATCCTAGAT 600  
 GTCCAGGACAGTGATGAGGCTCCTACCGCTGCGTGGCCACCAATTGAGCCCGCCAACGA 660  
 TTCAGCCAGGAGGCTCGCTCACTGTGGCCCTCAGAGGGTCTTGGAGGCTACAGGGGG 720  
 CAGGATGTGGTCATTGTGGCAGCCCCAGAGAACCACCGGTAGTGTCTGGACAGAATGTA 780  
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 GGAAAGCCTATCTCCACGGATGTCATCGTTCTGGGCGGACCAATCTACTCATCGCCAGC 900  
 GCGCAGCCTCGGCACTCTGGAGTCTATGTCTGCGGAGCCAACAAGCCCCCTCACGCGTGAC 960  
 TTCGCCACTGCGGCTGCTGAGCTCCGAGTGTCTGCTGCCCCAGCCATCTCGCAGGCACCC 1020  
 GAGGCGCTCTCGCGGACGCGGGCCAGCACCGCGCGCTTCGTGTGCGGGCGTCCGGGGAG 1080  
 CCACGGCCCCGCTGCACTGGCTGCACGACGGGATCCCGTTGCGACCCAATGGCGCGCTC 1140  
 AAGGTGCAGGGCGGTGGCGGCAGCTTGGTCACTCACTCAGATCGGCCCTGACGAGCCTGGC 1200  
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 AGCTCCTCTGTGCTGGTGGCTGGGAGCGGCTGAGTTGCACAGCGAGCAAATCATTGGC 1380  
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 AACTGAGCATGTCCCCAGCGCAGCACCCAGCTTACCTTGTCCAGCCCCAACCCCTCG 1620  
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 TCAGTGGCACTGGCGCTGGCTATGGAGTCCCTTCTCAGTGGATGCAGCACAGGACCT 1860  
 GGTGTGCACAACCAGAGCCATGTTCCCTTTGCCCCCTGCAGAATTGAAGGTGAGGGCAAAG 1920  
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 ACCCTGCGCTGACCGGCCCTCAACACCTCCTTCTGACCTGCGCTGAGCCCCCTGACACCA 2580  
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 ACTCTGCAAGAGACATTCTCAGACTCCTTGGATGTGCACGCCGTACGGGCATCATCGTG 2880  
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 TCCACAGGGAAGCCCTTCCCGATTGTCTCCTCAGGCACCCAGGAACCCAGCGCTC 3000  
 TACACAAGAGCTCGGCTTGGGCCCTCCAGTGTCCCTGTGCCCATGAGTTGGAGTCCCTC 3060  
 GTGCATCCTCGTCCCCAGGATTGGTCCCCACCACCCTCAGATGTGGAAGACAAGGCTGAA 3120  
 GTACACAGCCTTATGGGTGGCAGTGTTCAGATTGCCGGGGCCACTCCAAGAGAAAGATC 3180  
 TCCTGGGCTCAGGCAGGGGACCAAACTGGGCAGGCTCCTGGGCAGGCTGTGAGCTGCC 3240  
 CAGGGTAGTGGTCCAAGGCCGCTCTGACCCGTGCTGCTGCTCAGCGGGAACCGGG 3300  
 CAGACATGCTGCTGCAAGCCCTGGTGTATGACGGCATAAAGAGCAACGGGAGAAAGAAG 3360  
 CCGTCCCCAGCCTGCAGGAATCAGGTGGAAGCTGAGGTCAATTGTCCACTCCGACTTCGGT 3420  
 GCATCCAAAGGATGTCTGACCTCCACCTCCAAGACCTGGAGCCAGAGGAACCACTGACT 3480

FIGURE 2A

GCAGAGACTCTGCCTTCCACGTCTGGAGCTGTGGATCTGTCTCAAGGAGCAGACTGGCTG 3540  
 GGCAGGGAGCTGGGAGGGTGCCAAACCAACCAAGTGGGCCAGAGAGGCTCACCTGCTTG 3600  
 CCAGAAGCAGCCAGTGCCTCCTGCTCCTGCTCAGACCTCCAGCCCAGCACTGCTATAGAG 3660  
 GAGGCCCTGGGAAAAGCTGCCAGCCCAAGCCCTGTGTCTCTAACAGTCAGCCCAAGC 3720  
 CTTCCCAGGGCCCCCTGTCTCCTCTGCTCAGGTCCCCTGAGCAGAAGGCAGATATGGCTCA 3780  
 GGAACATGCCATGCATGGCTACACATGTGTGTACTAGAGATATCCATAAGTCCTTGGAGC 3840  
 CTCTTAGGGTCCCTTTGGCTGGGGTTGGGGAGAACTTTACTCTCCCTCATATTCTGCATCA 3900  
 CATACAGGAGGGAAGTGGAGACACAGCTCTGTGTAATGGACACGTGTGAAGTCGTGTGTGT 3960  
 GTGTGTGTGTGTGTGTGTGTGGTTGAGCTAGGAAACCTCTCCCTATGTAGCACTCACTGTG 4020  
 GCCTAGTTGACCCTCCGTGGCAGGATGGTGTAACAGTGATCAGTGCCAGCTCTTTGAGCT 4080  
 TTTAGCCTTGTACCTTAGCCTTTTATTACACTCTGAGAGTGTCTCCAGTGTGTGTCTAC 4140  
 AAAGACAGCGCCAGCCCTCTTCTGTGCTGTGTGTGAGCAGAGTGCCAGTCAACTCCAC 4200  
 GGGCCTATGACACCGCAGCCTACCACAGCATGGCTGTCTATCCCCCTGGCCTCCTAAGGTC 4260  
 CAGATGTCTGGGTGAACCCAGCTCAGCTCCCTCTCCTTTGAGCATCTCTGTACCTAATT 4320  
 TTGTAATCTGGGAAGTGCCCTGGTTGGGAAATCTTCTTTGACCCCTGTCCCTCTCTGCC 4380  
 CCTTCCTTCATTGTCTGGTGATCTGTCTCATGTCTCTGTCTCGATTATCCTGGGGCC 4440  
 CTTCTCTTTCCCATGATGCCCCGATTCTCTCACTGCTGTCTTTCATTCTGTCTGCCATG 4500  
 CTTGTCTTTATGTCTGTGTCTTCTCGTCCCTGAGTTCAACCTATGCACCCCTTTCCTAACA 4560  
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 GAGTCCAGGCTGCACAGGGGAACCCCAAGAAGGGGTAGGGAGTGAACCAAGAGGCTGA 4800  
 AAAAAATGGCTGCCACCCATCTGCACAGAGAGATGGGTGTGTGCTTTGACGTGCAGTC 4860  
 CTGGCTGAAACTGAAGGGGTGAGGAGAGGGGAGCTACTGGGGCTGCCATGGCTCAGTTCC 4920  
 CTGACCTGGAGCCCTGAACCTGGCTTCCAGAGTAGCAAGAGTTTCCCTCAAGATGCTGT 4980  
 AAGGGAGTCTTTGCTATAGGAAAAGGGCGGCTGGCTCATTATTTATTTTATCTTTTACA 5040  
 CTGAATCCCAAAATCATCTTACCACAAAGGGCCAAGCCTGACTGGTATTTCTGAGTCAC 5100  
 AAGAGCCATGCCATCTCTGCTTCTCACCTCAGTCATGTCCAGAAATGTGAGATCCA 5160  
 GTGGCATCTGTGCTCTTGCTGCACATCTTTCTATTTCAACTGGCTGGCACATCAAGTGT 5220  
 AACTCTGGCTTCTGGGCCAAGTTAGAAATAACCAAGTCTATTTTCCCTTTATTTTATTTA 5280  
 TTTTATTTTATTTATGTCTTTTCTAGTGGAGTTGTAGCTTCTGAAAGCGTCTGTGTTATT 5340  
 AGCCTTGTGTGCTCACTCATGTTTGACCCACCCACATTTCTTCTCCTCCCCTCTTCAGC 5400  
 CAGCCTATGATAACACTAAAGATTATTAATGCTGGCTTCGTATCTCATTAAAGACAGGAT 5460  
 TGTCACCTGAACTACTTCTATAGCATTCAAAGTGGCCACGGCCAACACCACCGTATGTTT 5520  
 CTTTATTGCTCTGAAGGTCAAGAGCCTCATTGTTTCTTCTGGTTAGATTCTTTTCTCTCC 5580  
 TTGCCCTGAATGAAATAACCGTTTAAACAGTAGGCTCTTAGCATCACACCACATAGTCAT 5640  
 TCCTCATGTTCTTGTGTTAAACAGCACTTGAGGTTCTGGGTTTAAATTAAATAGCTGCAAA 5700  
 TGAGACAATTTATAACCCATTAGGCTGGGTGGAAAATTGTTCTCAAAGCAATAAGTAA 5760  
 TAAATCTGGTATCTGCCCTATAACTCACAGTTGATAAGAAAGTAGCCAGAACTCACTAGCA 5820  
 TTATATATGATTGGGGTTCTGAGTAACTGGGGAGTGTAGCTTTGTGACTTTGTAGCACC 5880  
 AGGTCTTATTAGGAAAGTCTGTTGGCCTTTTACAGGGCATTAGTCCCTTTGTGCTTTGCC 5940  
 ATGGATGCCCTTAAGTTCTTTGGAGTCTCATTAAAGAATTCCTTTTCTCGAAGCATGACAA 6000  
 GTGTATCGCAATACTTACATGCTCACTCGTTTACCTGGCTTAGTTTGTGCTGGGTATT 6060  
 AATTGCATTTCCAGCATCATGCTTCTCCTTACAAATATGATATTCTTTATTGTTACAC 6120  
 TAAGGTGTTGATCATGTATCTGTCCCTGTAAAGAATTAATAAATATTTTCCAGAC 6176

FIGURE 2A

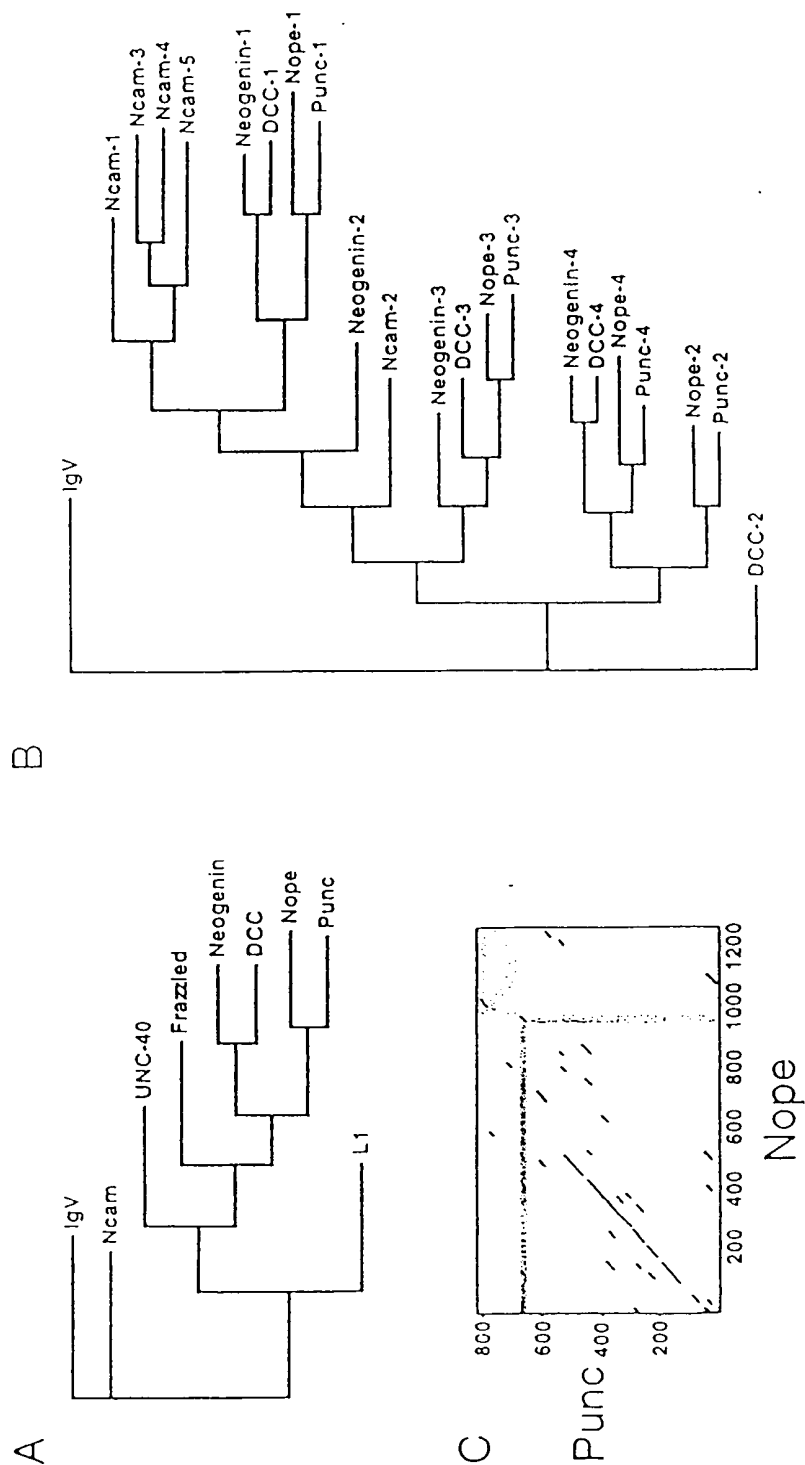
10	20	30	40	50	60	70	80
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MARADTGRGLLVLTFCLLSARGELPLQETTTVKLSCDEGPLQVILGPEQAVVLDCTLGATAAGPTRVTWSKDGDTVLEH  
ENLHLLPNGSLWLSSPLEQEDSDDEEALRIWKVTEGSYSLAHSPLGVVASQVAVVKLATLEDFSLHPESQIVEENGTARG  
FECHTKGLPAPIITWEKDQVTVPEEPRLITLPKWLLQILDVQDSDAGSYRCVATNSARQRFSQEASLTVALRGSLEATRG  
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YYQCAENSAGTACAAAPLAVVVREGLPSAPTRVTATPLSSSSVLVAWERPELHSEQIIGFSLHYQKARGVDNVEYQFAV  
NNDTTELQVRDLEPNTDYEFYVVAYSQLGASRTSSPALVHTLDDVPSAAPQLTLSSPNPSDIRVAWLPLPSSLSNGQVLK  
YKIEYGLGKEDQVFSTEVPNETQLTLNSLQPNKVYRVRISAGTGAGYGVPSQWMQHRTPGVHNQSHVPFAPAELKVRAK  
MESLVVSWQPPPHPTQISGYKLYWGEVGTEEEADGDRPPGGRGDQAWDGPVRLKKKVQYELTQLVPGRPYEVLVAFN  
KHEDGYAAVWKGKTEKAPDLPIQRGPPLPPAHVHAESNSSTSIWLRWKKPDFTTVKIVNYTVRFGPWGLRNASLVTYY  
TSSGEDILIGGLKPFTKYFAVQSHGVMDGPFGSVVERSTLPDRPSTPPSDLRLSPLTPSTVRLHWCPTEPNGEIVEY  
LILYSNNHTQPEHQWTLLTTEGNIFAEVHGLESDTRYFFKMGARTEVGPGFSRLQDVITLQETFSDSLDVHAVIGRM  
SVCLGLUCLACACAGERQSSSHREALPGLSSSGTPGNPALYTRARLGPPSVPAAHELESLVHPRPDWSPPSDVEDKAE  
VHSLMGGSVSDCRGHSKRKISWAQAGGPNWAGSWAGCELPQSGGRPALTRALLPPAGTGQTLLLQALVYDGIKSNGRKK  
PSPACRNQVEAEIVHSDFGASKGCPDLHLQDLEPEEPLTAETLPSTSGAVDLSQGADWLGRELGGCQPTTSGPERLTCL  
PEAASASCSCSDLQPSTAIEEAPGKSCQPKALCPLTVSPSLPRAPVSSAQVP

FIGURE 2B

10 20 30 40 50 60  
 1 AGGCTGGTGGCGCGCGGGCGCGTGTCCCTGTGGTGCAGGGTGGCCACACTGGCGGGGCG  
 61 CCCCCGCGTGGGCGCTAGCCCAAGATGGCGATGGAGGGGCGGGCGAGCTGGCCGCGGCC  
 121 CCGGCCCCCGCGCGCGCCCCCGCTCGGCCCCGGCCCCGGAGGCCCGCGCCCCGCCGCGG  
 181 CGCCGCGCCTCCCGAGCCACTGACGCCCGGCGCGCCTCCCCCGGCGGCGGCCAGGCG  
 MetAlaArgAlaAspThrGlyArgG  
 241 CCCGGACGCGGCGGCAGCGGCCGAGCCCGGCCCTATGGCGCGGGCGGACACGGGCCGCG  
 splice  
 site  
 | intron 1 >>  
 lyLeuLeuValLeuThrPheCysLeuLeuSerAlaArg |  
 301 GGCTCCTGGTGTGTGACCTTCTGCCTGCTGTCCGCGCGCGGTAAGGGCCCCGGTGGCCGCA  
 361 GTCGCGAGTGGGCGTCCCCGGCGCCCGCGATGCTTGCGCGCCGGGGGCTGTGGGACTTG  
 421 CCCCCAGGGGTGTGTGTCCTTGCTGTGCACAGCCTGGCACCGTGCCTGTCCCCCTGCGC  
 481 GTGGCCCTTGTGCATGTGAG

FIGURE 2C



**FIGURE 3**

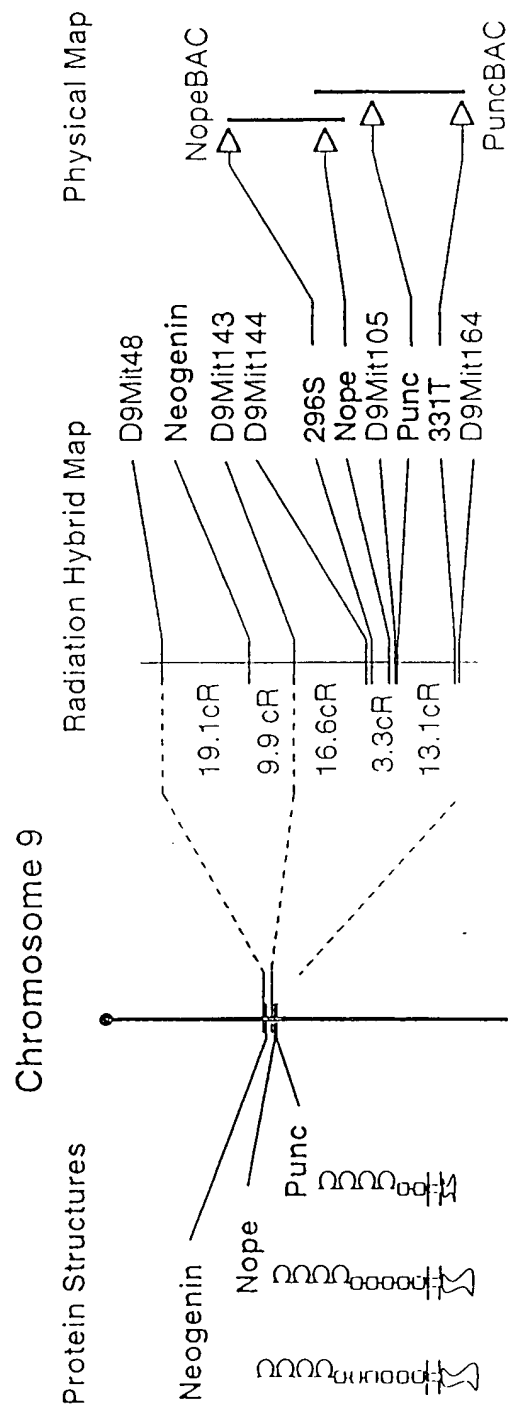


FIGURE 4